

NMP/EO CNTL. NO.: 490-NMP-7120.1.1B

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EFFECTIVE DATE: March 16, 2000

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PROGRAM PLAN
NEW MILLENNIUM/EARTH OBSERVING PROGRAM
AT GODDARD SPACE FLIGHT CENTER

In the event that a commitment cannot be met, it is the responsibility of the signing parties to notify the others and to initiate the timely renegotiation of the terms of this agreement.

Agreements:

Original Signed by: A.V. Diaz

Date: 03/20/00

A.V. Diaz
Director, Goddard Space Flight Center

Dr. Ghassem Asrar
Associate Administrator of Earth Science

Date: _____

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Original Signed by: *Bryant Cramer*

Date: 03/16/00

Bryant Cramer
NMP/EO Program Implementation Manager

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AT GODDARD SPACE FLIGHT CENTER****TABLE OF CONTENTS**

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PROGRAM PLAN
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1.0 INTRODUCTION AND PROGRAM OVERVIEW

1.1 Introduction

The New Millennium/Earth Observing Program (NMP/EO) at the Goddard Space Flight Center (GSFC) is established under the general aegis of the New Millennium Program (NMP) to formulate and implement Earth science technology validation missions. The purpose of the New Millennium Program is to conduct space flight validation of breakthrough technologies that will significantly benefit future space science and Earth science missions. The breakthrough technologies are selected to achieve the following goals:

- Enable new science capabilities using a crosscutting approach to fulfill the requirements of the Space and Earth Science Enterprises;
- Reduce the costs of future space and Earth science missions;
- Mitigate the risks to the first users; and
- Enable rapid infusion into future missions.

The NMP/EO projects may also return valuable science data to the extent possible within the context of the validation plans, the available budget, and other project constraints. The NMP/EO Program will maximize the participation from industry, universities, and other government agencies to reach its goals.

The breakthrough technologies in each project are divided into two categories: project-defining and project-enhancing. Project-defining technologies are new technologies that replace proven technologies and whose successful operations are required for project success. Project-enhancing technologies are new technologies whose successful operations enhance the project but are not required for project success.

The technology validation flights to support Earth science are Earth Observing (EO) projects.

1.2 Program Overview

On July 30, 1996, the Associate Administrator for Space Science and the Acting Associate Administrator for Mission to Planet Earth (now the Earth Science Enterprise) designated the Jet Propulsion Laboratory (JPL) as the Lead Center for the New Millennium Program (NMP). In written guidance received for Program Operating Plan (POP) 00-1, the GSFC was directed to prepare this NMP/EO Program Plan, presuming GSFC as Lead Center for certain NMP/EO projects. This program plan documents the understanding between the National Aeronautics and Space Administration (NASA) and the Goddard Space Flight Center (GSFC) regarding the management of NASA's New Millennium/Earth Observing (NMP/EO) Program at GSFC.

The NMP/EO Program Plan establishes at the program level:

- Objectives
- Requirements and goals
- Management organizations responsible for the program
- Top-level implementation approach
- Resources, schedules, and controls
- Program metrics

The NMP/EO Program Office currently has a single EO mission in implementation: Earth Observing-1 (EO-1), planned for a 3rd quarter CY00 Med-Lite launch.

2.0 PROGRAM OBJECTIVES

2.1 Program Purpose and the NASA Strategic Plan

The President's National Space Policy requires NASA to "Enhance the economic competitiveness and the scientific and technical capabilities of the United States;" and to "Encourage State, local, and private investment in, and use of, space technologies." To support this policy, and to meet all the of process objectives of the Provide Aerospace Products and Capabilities (PAPAC) process in support of the Earth Science Enterprise (as defined in the NASA Strategic Plan), the NMP/EO Program has set forth the following program purposes:

- Enable 21st Century science missions through the identification and validation of advanced technologies selected for flight application.
- Focus on new, breakthrough technologies that contribute significantly to reducing the cost while increasing the relative scientific capability of future Earth science missions.

- Through technology validation flights, demonstrate the selected technologies and exploit scientific opportunities.
- Infuse new technologies into the nation's commercial base, with significant benefits to US industrial competitiveness.
- Pioneer new ways of partnering with industry, nonprofit organizations, academic institutions, and other government agencies.

2.2 Program Objectives, Performance Goals and Indicators

The Earth Science Enterprise utilizes NMP/EO as a primary path to flight validate key emerging technologies to enable exciting 21st century science missions. The planning, implementation, and assessment of the program have three primary objectives. They are:

1. To identify and select technologies for flight validation which optimize the benefits to the Earth Science Program;
2. To develop and implement effective validation flight projects as appropriate testbeds to mitigate the risks for using the selected technologies; and
3. To facilitate the infusion of the validated technologies into future science mission opportunities.

The performance metrics for these objectives are as follows:

- A minimum of one project-defining technology and a minimum of two project-enhancing technologies are selected for each project using broadly announced competitive procurements.
- A minimum of 90 percent of the selected project-defining technologies is flight validated, and one hundred percent of the project-defining technologies that are launched are validated.
- A minimum of 75 percent of the selected project-enhancing technologies is flight validated.
- Data from technology validations are made available to technology providers and mission planners within six months of the completion of flight validation subject to the restrictions imposed by technology transfer and International Traffic in Arms Regulations (ITAR).

3.0 CUSTOMER DEFINITION AND ADVOCACY

The NMP/EO Program serves two primary customers. In the near-term, the Program serves the space technology community in bringing to the fore promising and exciting technologies, providing those competitively-selected technologies with the opportunity for flight validation. In the longer term, the Program serves the Earth Science community by developing and infusing technologies to meet strategic scientific objectives.

The NMP/EO Program ensures customer advocacy by direct involvement on NASA Headquarters Earth Science Enterprise (ESE) science and technology committees, active participation in the NMP Science Working Group (SWG), NMP Integrated Product Development Teams (IDPTs), and NMP Architecture Development Teams and support of the NRA and Technology Development Announcement processes. The Program also requires creation and active support of mission science teams and a Mission Technologist for EO missions when selected for implementation.

Contact between the NMP/EO Program Office and the science community is through selected Mission Scientists, Advisory Committee meetings, NRA pre-proposal conferences, scientific meetings, technology showcases and periodic workshops to solicit feedback on program processes.

4.0 PROGRAM AUTHORITY AND MANAGEMENT STRUCTURE

The Lead Center for the New Millennium Program is the Jet Propulsion Laboratory (JPL) as documented in the NMP Program Commitment Agreement (PCA). The Lead Center for the NMP/EO-1 Mission is the Goddard Space Flight Center (GSFC). The Governing Program Management Council (GPMC) for the NMP/EO-1 Mission is the Program Management Council (PMC) at GSFC. The EO-1 Project Plan is approved by the NMP/EO Program Office at GSFC.

The NMP/EO Program Office currently has a single major component:

1. Earth Observing-1 (EO-1), a mission to flight validate instruments and technologies which will significantly reduce the costs of future LANDSAT missions, is managed at the GSFC. It includes the Advanced Land Imager (ALI), developed by MIT/Lincoln Laboratory; the Hyperspectral Imaging Spectrometer (Hyperion), developed by TRW; and eight technologies to be validated which are being developed by the GSFC and its industry partners. The Kennedy Space Center (KSC) is providing the Med-Lite launch vehicle for a 3rd quarter CY00 launch from the Western Test Range (WTR).

Any new projects that may be assigned to NMP/EO Office at GSFC will be formulated under the processes defined by the New Millennium Program Office at JPL, and will be implemented in accordance with this Program Plan.

The Enterprise Associate Administrator shall be responsible for project formulation through missions selection.

**CHECK THE EO-1 HOME PAGE AT <http://eo1.gsfc.nasa.gov/Project/Project.html>
TO VERIFY THAT THIS IS THE CORRECT VERSION PRIOR TO USE.**

4.1 Organization

The organization of the NMP/EO Program Office at GSFC is shown in Figure 1. The relationship to the New Millennium Program Office at JPL is defined in the NMP Program Commitment Agreement (PCA).

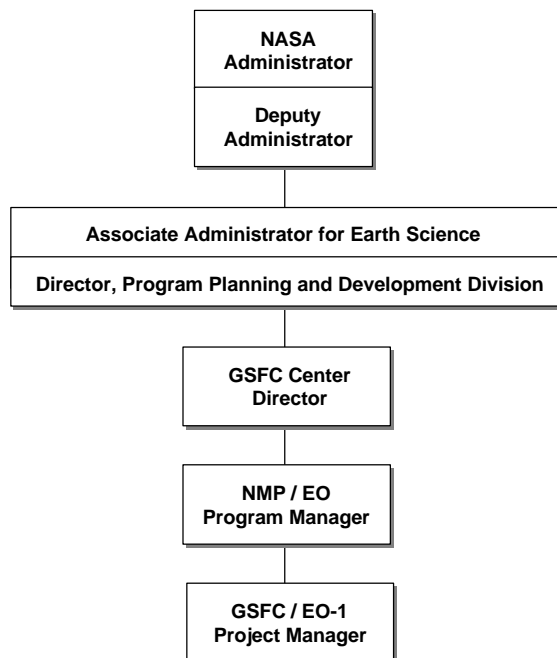


Figure 1. Overview of NASA Organization for the NMP / EO Program

4.2 Responsibilities

4.2.1 NASA Headquarters

In accordance with the NASA Strategic Management Handbook (October 1996), NASA Headquarters Office of Earth Science (OES) has the responsibility for establishing overall NMP/EO Program policy, soliciting and selecting missions, establishing the Program and science objectives and requirements, allocating the Program budget guidelines, and assessing Program performance. With the Office of Space Science (OSS), OES develops and maintains the NMP Program Commitment Agreement (PCA). NASA Headquarters also has the responsibility for establishing the formal agreements with other U.S. Government organizations and with foreign space organizations and institutions.

The Enterprise Associate Administrator shall be responsible for project formulation through missions selection.

4.2.2 Coordination with New Millennium Program Office (JPL)

There is substantial coordination between the NMP/EO Program Office at GSFC and the New Millennium Program Office at JPL. The NMP/EO Program Office (GSFC) routinely participates in the activities of the Program Office (JPL). This participation includes weekly staff meetings and all of the workshops and special events associated with the NMP. More specifically, the NMP/EO Program Office (GSFC) supports the development of new NMP guidelines and policies, supports advanced planning exercises, supports the definition and selection of new NMP missions, supports the technology transfer and infusion workshops, coordinates external activities, and actively participates in the integration of the NMP budgets and schedules. Throughout the development of missions assigned to GSFC, the NMP/EO Program Office (GSFC) follows the NMP Guidelines and Policies originated by the NMP Program Office (JPL).

4.2.3 Lead Center

The AA for Earth Science has assigned GSFC to be the Lead Center for the NMP/EO missions assigned to GSFC. The GSFC Center Director is responsible for overall Program success and is accountable to the AA for Earth Science. The GSFC Center Director holds the NMP/EO Program Manager accountable for directing a program which meets Agency, Center, and NMP requirements within established cost, schedule, and performance boundaries. The GSFC Center Director shall certify the flight readiness of each NMP/EO mission to the AA for Earth Science.

4.2.4 Program Office

The NMP/EO Program Office is responsible for the management of NMP/EO project development, launch, and on-orbit checkout. The Program Office develops the integrated budgetary requirements and recommendations for the NMP/EO Program and defines the Program content and schedule based on OES budgetary guidelines. Resource requirements for each project from definition and development through mission operations are defined as including funding, manpower, facilities, technical and institutional support, launch facilities, and other resources such as tracking and data capabilities and services which make mission success possible. Program risks and internal agreements are indicated as well. The Program Office establishes operational policies for the NMP/EO Program, assures appropriate independent review of NMP/EO projects, monitors the progress of each project, reports project and program status to GSFC and NASA management, recommends necessary corrective and preventative actions, and provides access to GSFC and NASA expertise and support for the projects. The Program Office is responsible to ensure each NMP/EO project is staying within the committed cost, schedule,

performance, reliability, and safety requirements. The Program Office promotes efficiencies through the application of innovative management practices, the identification and implementation of inter-mission synergies, and the capture and application of lessons learned. The Program Office also initiates NASA interagency and international agreements associated with NMP/EO Projects, and supports OES and the New Millennium Program Office at JPL in the preparation of NMP/EO NASA Research Announcements (NRAs) and Technology Development Announcements. The Program Office appoints a Project Manager who is responsible for the above actions for each mission.

4.2.5 Project Manager

The Project Manager is singularly expected to be in charge of each technology validation flight, with full responsibility for its scientific and technical integrity, safety, and success. The project management team will have a large degree of freedom to accomplish its proposed objectives within the stated constraints with only essential NASA oversight.

4.3 NMP/EO Program Office Organization

The NMP/EO Program Office is located within the GSFC Flight Programs and Projects Directorate (FPPD). The Program Office provides a shared resources team for all projects and program management. The Project Manager for each mission at GSFC reports to the NMP/EO Program Manager. Reporting for all NMP/EO projects is through the NMP/EO Program Office.

4.4 Program Reporting Requirements

The NMP/EO Program is required to report to senior NASA management in the following forums:

FORUM	REPORT	SCHEDULE
GSFC PMC	Technical Progress, Cost, Schedule	Monthly
ESE Weekly Status Reports	Electronic Weekly Progress Report	Weekly

4.5 Program Flexibility

It is recognized that the NMP/EO Program structure and processes will change in response to the needs of the OES and the science community, and to the missions which may be assigned to the Program. The NMP/EO

Program Office will work with OES to define and implement appropriate changes to the program. These changes will be formalized by changes to this document.

5.0 PROGRAM REQUIREMENTS

The New Millennium/Earth Observing Program shall meet the following minimum requirements and strive to reach the following goals:

5.1 Requirements

1. Identify the capabilities required by the science missions of the 21st century, in cooperation with the New Millennium Science Working Group (SWG), the Earth Science and Space Science Enterprises and their respective science and technology committees.
2. Identify advanced technologies that promise the greatest payoff for Earth and space science missions of the 21st century.
3. Develop technology roadmaps and required technologies.
4. Design, develop, and operate flights that will validate the selected technologies.
5. Establish strong partnerships and form teams with other NASA centers, as well as with industry, universities, non-profit organizations, and other government agencies for the development of technologies.
6. Develop acquisition, risk management, and quality assurance practices that explore revolutionary new ways of developing spacecraft and instruments for the future.

5.2 Supplemental Goals

1. Identify scientific opportunities that can be exploited by the validation flights.
2. Transfer technologies developed and demonstrated by the program into other NASA programs, industry's technological base, and academia.

3. Conduct an effective program of providing program information to the science and engineering communities, the educational community, and the public.

6.0 PROGRAM SCHEDULE

Controlled milestones coincide with the performance metrics and are shown in Figure 2.

MILESTONE	DATES OF MILESTONES FOR EO-1 PROJECT
Initiate Formulation	3/1995
Initiate Implementation After Validating that Each Technology Coincides with at Least One Science Requirement in the Enterprise Strategic Plan	3/1996
Mission Confirmation Review	5/1997
Mission-Level Critical Design Review	6/1997
Mission Operations Review	11/1997
Basic Command and Telemetry Test	11/1998
First Instrument Delivery (Advanced Land Imager)	3/1999
Observatory I&T Start	3/1999
Mission-Level Pre-Environmental Review	6/1999
Last Instrument Delivery (Hyperion)	7/1999
First Observatory End-to-End Data Flow Test	11/1999
Observatory Pre-Ship Review	12/1999
Operational Readiness Review	6/2000
Mission Readiness Review	7/2000
Launch Readiness Date	8/2000
Observatory Checkout Complete	11/2000
Distribution of Calibrated/Validated Data	12/2000
Complete Flight Data Collection for Technology Validation	8/2001
Disseminate Technology Validation Results	2/2002

Figure 2. Controlled Milestone Dates for NMP/EO-1 Project

7.0 PROGRAM RESOURCES

The approved Program Operating Plan (POP) 00-1 guidelines by Center for the NMP/EO Program are shown in Figure 3.

PROJECT	PERFORMING CENTER	FY 2000	FY 2001	FY 2002
EO-1		19.5	5.6	--
	GSFC	17.9	5.6	--
	KSC (Launch Services)	1.6	--	--

Figure 3. POP 00-1 Guidelines for NMP/EO-1 Project (\$M)

Civil Service workforce levels are shown in Figure 4.

PROJECT	PERFORMING CENTER	FY 2000	FY 2001	FY 2002
EO-1		27.7	5.4	1.1
	GSFC	26.6	5.4	1.1
	KSC (Launch Services)	1.1	--	--

Figure 4. Civil Service Manpower for NMP/EO-1 Project (FTE)

8.0 CONTROLS

8.1 Program Level

The Program Manager, GSFC Center Director, and AA must approve changes to this NMP/EO Program Plan for OES. The NMP/EO Program Office will administer configuration management of this document. Because of the relatively low cost and short development schedules of NMP/EO projects, the Confirmation Review substitutes for the Non-Advocate Review (NAR) and no Independent Annual Review (IAR) will be held for NMP/EO projects. NRA review and mission selection is the responsibility of OES and is carried out to meet the requirements of the NASA Federal Acquisition Regulations (FAR) Supplement.

The OES Director, Program Planning and Development Division, is responsible for maintenance of the Program Commitment Agreement (PCA). Any candidate changes to the PCA must be approved by the AA for OES and then presented to the NASA PMC for their concurrence.

8.2 Project Level

The key NMP/EO Program requirements on each project are the technology validation requirements, science requirements, launch timeframe, and cost limits, as documented in the Project Plan for that project. The Program

Office regularly reviews each project's status and projected ability to meet its requirements. If at any time the project appears likely to not meet its program level requirements, it is subject to a special review and possible cancellation by the AA for OES.

There is no Allowance for Programmatic Adjustment (APA) held for NMP/EO projects by OES or by the Program Office. All reserves for NMP/EO projects are controlled at the project level, within the previously established cost limits.

Independent review during the NRA selection, Concept Review, and Confirmation Review verify each NMP/EO project for compliance with NMP/EO Program requirements. The independent Concept Review occurs at the end of the mission Concept Study. Authority to proceed into the remainder of project formulation is based on the results of the Concept Review.

The Confirmation Review is conducted at the end of project formulation. In preparation for the Confirmation Review, the Program Office conducts an independent Confirmation Assessment (CA). The chairman of this review is normally from outside NASA. The CA includes both technical content at the PDR level and programmatic content at the NAR level. The CA chairman presents the findings and recommendations from the CA to the Confirmation Readiness Review (CRR). The chairman of the CRR or his representative presents a summary of the CRR and a confirmation recommendation to the Confirmation Review. Each mission is reviewed for flight readiness about six weeks before launch. The Mission Readiness Review (MRR) is held by the Goddard PMC and based on the results of that review, the mission is certified for flight readiness by the GSFC Center Director to the AA/OES.

9.0 RELATIONSHIPS TO OTHER PROGRAMS AND AGREEMENTS

Technologies selected for NMP/EO projects are proposed by teams comprised of combinations of NASA and non-NASA organizations. When a NASA organization is selected as part of a technology team, an agreement is prepared between the NMP Office and the selected NASA organization and finalized before initiating project implementation. When a non-NASA government organization is selected as part of a technology team, an agreement is prepared between the NMP Office and the organization and finalized before initiating project

implementation. Appropriate agreements are also prepared between the NMP and other NASA and non-NASA organizations to document other support for the projects. The agreements for each project are part of the project implementation plans. They are listed in the NMP Program Commitment Agreement (PCA) for the projects approved for implementation.

10.0 ACQUISITION STRATEGY

The NMP/EO Program will use broadly announced competitive procurements and partnerships to the greatest extent possible. NMP/EO will promote and encourage participation by universities, industry, other government agencies, and small and disadvantaged businesses.

11.0 COMMERCIALIZATION OPPORTUNITIES

Technologies selected for use in NMP/EO technology validation flights are selected competitively through Technology Development Announcements, and are selected in part for their commercialization potential. Choosing industry partners in this fashion facilitates technology transfer to build America's industrial base.

12.0 TECHNOLOGY ASSESSMENT

New Millennium Technology Development Announcements will solicit proposals for membership in the IPDTs from potential partners in industry, academia, other government agencies, and non-profit organizations. The proposers will submit responses to the thrust(s) defined in that Announcement, which describe in detail the breakthrough technology they wish to validate on NMP flights.

13.0 DATA MANAGEMENT

NMP/EO technology validation and science teams will be responsible for initial analysis of the data, their subsequent delivery to an appropriate data repository, the publication of scientific findings, and communication of the results to the public.

The NMP distributes information from technology validations, engineering, and technical management as openly and as rapidly as allowed by technology transfer and International Traffic in Arms Regulations (ITAR). In accordance with NASA policy, data are to be released as soon as possible after a brief validation period appropriate for the mission. Each NMP/EO project shall prepare a Science Data Management Plan for approval by the Project and Program Scientists.

NMP/EO technology validation and science teams will be responsible for collecting the scientific, engineering, and ancillary information necessary to validate and calibrate the scientific data prior to depositing it in the appropriate data repository. The time required to complete this process and should be the minimum necessary to provide appropriate data to the scientific and engineering communities and the general public.

14.0 RISK MANAGEMENT

The NMP/EO risk management policy is based on the following five guidelines:

- A minimum of 75 percent of the selected project-enhancing technologies is flight validated.
- NMP shall not require flight-proven technologies as backup for new technologies.
- Single-string design is acceptable.
- Cost-effective risk avoidance practices shall be employed.
- Technologies shall be categorized according to their role in a mission:
 - Essential*: The mission cannot be carried out without these technologies
 - Fundamental*: Existing technologies can be substituted for the mission
 - Enhancing*: The mission can be flown without these technologies
- Flight incorporation of selected technologies into flight projects is contingent upon the successful completion of three technology readiness gates (peer reviews).

Since they are independent and each is unique, each NMP/EO project will manage risk differently. Each will have a risk management plan documented in its Project Plan. The primary risk management tools for NMP/EO projects are schedule and financial reserves, as well as descoping of mission requirements above the minimum technology validation requirements.

Each NASA Center will be responsible for implementing an assurance program for their NMP/EO flights consistent with ISO 9001 implementation. Mission assurance support from industrial partners will be as negotiated with the individual NMP/EO flights. Emphasis will be on the use of industrial standards consistent with ISO 9001 implementation for technology development and validation. Product assurance programs for launch services will be those established by the launch services provider.

15.0 LOGISTICS, TEST AND VERIFICATION

Logistics and test and verification plans are mission-unique and are addressed in the Project Plan for each project.

16.0 REVIEWS

16.1 Program Reviews

Because the NMP/EO Program is an existing program with independent projects, the periodic management reporting and annual Program Operating Plan (POP) process provides adequate program evaluation. Therefore, no program NAR or IARs are necessary for the NMP/EO Program.

16.2 Project Reviews

The review and reporting requirements will vary from project to project depending on the confirmed mission cost and schedule, and the level of technical and programmatic risk, along with other programmatic considerations. The following are examples of the types of reviews that may be implemented for a given project:

- Concept Review
- System Requirements Review (SRR)
- Confirmation Assessment (CA)
- Confirmation Readiness Review (CRR)
- Confirmation Review (CR)
- Preliminary Design Review (PDR)
- Subsystem Peer Reviews
- Critical Design Review (CDR)
- Pre-Environmental Review (PER)
- Pre-Ship Review (PSR)
- Flight Readiness Review (FRR)
- Operational Readiness Review (ORR)
- Mission Operations Review (MOR)
- Mission Readiness Review (MRR)
- Launch Readiness Review (LRR)

The minimum set of NASA-held reviews for each NMP/EO mission is: Concept Review, Confirmation Assessment, Confirmation Readiness Review, Confirmation Review, Mission Readiness Review and all reviews associated with the launch vehicle or launch site. All other reviews may be project-defined and implemented. All reviews must be conducted by a review team that is independent of the team being reviewed. The Program Office will participate in all project reviews. The GSFC Systems Review Office (SRO) will participate in the major technical reviews for NMP/EO projects being implemented at GSFC.

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Because of the relatively low cost and short schedules of NMP/EO missions, the Confirmation Review substitutes for the Non-Advocate Review (NAR) and no Independent Annual Review (IAR) will be held for NMP/EO projects.

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17.0 TAILORING

In accordance with the NMP PCA, the NMP/EO Program has tailored its approach to meeting the requirements of NPG 7120.5A. It divides the Formulation Phase into two or more segments. More than one concept may be approved to start Formulation. Positive results of reviews are required to advance to succeeding segments. A review that confirms the commitment to move into the Implementation Phase is conducted instead of a Non-Advocate Review.

Methods that provide the equivalent content to Earned Value Management are used to assess technical, cost, and schedule parameters during project and Program execution. The NMP distributes information from technology validations, engineering, and technical management as openly and as rapidly as allowed by technology transfer and International Traffic in Arms Regulations. It makes a commitment to continuous learning and competence in project and program management by permitting substitutions of required courses for experience and by holding program and project managers' line supervisors accountable for annual training requirements.

18.0 ACRONYM LIST

AA	Associate Administrator
ALI	Advanced Land Imager
APA	Allowance for Programmatic Adjustment
CA	Confirmation Assessment
CDR	Critical Design Review
CR	Confirmation Review
CRR	Confirmation Readiness Review
ELVs	Expendable Launch Vehicles
EO	Earth Observing
ESE	Earth Science Enterprise
FAR	Federal Acquisition Regulations
FPD	Flight Projects Directorate
FRR	Flight Readiness Review
GPMC	Governing Program Management Council
GSFC	Goddard Space Flight Center
IAR	Independent Annual Review
IPDTs	Integrated Product Development Teams
ISO 9001	International Organization for Standardization/Quality Management System Standard 9001
ITAR	International Traffic in Arms Regulations
JPL	Jet Propulsion Laboratory
JSC	Johnson Space Center
KSC	Kennedy Space Center
LLNL	Lawrence Livermore National Laboratories
LRR	Launch Readiness Review
MIT	Massachusetts Institute of Technology
MOR	Mission Operations Review
MRR	Mission Readiness Review
NAR	Non-Advocate Review
NASA	National Aeronautics and Space Administration
NMP	New Millennium Program
NRA	NASA Research Announcement
ORR	Operational Readiness Review
OES	Office of Earth Science, NASA Headquarters

OSS	Office of Space Science, NASA Headquarters
PAPAC	Provide Aerospace Products and Capabilities
PCA	Program Commitment Agreement
PDR	Preliminary Design Review
PER	Pre-Environmental Review
PMC	Program Management Council
POP	Program Operating Plan
PSR	Pre-Ship Review
SRO	Systems Review Office, GSFC
SRR	System Requirements Review
STS	Space Transportation System
SWG	Science Working Group
WTR	Western Test Range

CHANGE HISTORY LOG

Revision	Effective Date	Description of Changes
Baseline	4/16/99	Original release (426-PG-7120.1.1).
A	8/16/99	<ol style="list-style-type: none">1. Clarified coordination with the New Millennium Program Office at JPL (para. 4.2.2).2. Deleted the EO-2 mission due to its cancellation.3. Changed the GSFC organization code from 426 to 490.
A	02/08/00	ADMINISTRATIVE CHANGE ONLY – to place the NMP/EO Program Plan under local configuration control per GPG 1410.2, and to remove it from the Goddard Directives Management System.
B	03/16/00	<ol style="list-style-type: none">1. Updated EO-1 launch readiness date and interim milestones per NASA HQ/Code Y guidance and formats (paras. 1.2, 4.0, and 6.0).2. Added Enterprise AA responsibility for formulation per NASA HQ/Code Y guidance (paras. 4.0, 4.2.1).3. Updated financial information in response to POP 00-1 guideline (para. 7.0).4. Clarified decision criteria for project review requirements (para. 16.2).